

CLAIMS

What is claimed is:

1. A coating composition comprising:
 - (A) a carboxyl functional component that is an optionally partially neutralized reaction product of
 - (1) a polyisocyanate having two or more isocyanate groups, and
 - (2) a reactive compound having two or more carboxyl groups, and one functional group selected from the group consisting of hydroxyl, amino, and mercaptan; and
 - (B) a component comprising a plurality of groups that are reactive with the carboxyl groups on the carboxyl functional component.
2. A composition according to Claim 1, wherein the reactive compound has three carboxyl groups.
3. A composition according to Claim 1, wherein the reactive compound has one hydroxyl group.
4. A composition according to Claim 1, wherein the reactive compound has one amino group.

5. A composition according to Claim 1, wherein the polyisocyanate has three isocyanate groups.

6. A composition according to Claim 1, wherein the polyisocyanate comprises an isocyanurate of a diisocyanate.

7. A composition according to Claim 1, wherein the polyisocyanate comprises an isocyanurate of a diisocyanate selected from the group consisting of isophorone diisocyanate, hexamethylene diisocyanate, and combinations thereof, and the reactive compound comprises citric acid.

8. A composition according to Claim 1, wherein Component (B) comprises oxazoline groups.

A 9. A composition according to Claim ¹~~8~~⁹, wherein component B comprises oxazine groups.

10. A composition according to Claim 1, wherein Component (B) comprises an amino resin.

11. A composition according to Claim 10, wherein the amino resin comprises a melamine formaldehyde resin.

12. A composition according to Claim 1, wherein Component (B) comprises epoxy groups.
13. A composition according to Claim 12, wherein Component (B) comprises copolymer of a glycidyl ester of acrylic or methacrylic acid.
14. A composition according to Claim 1, further comprising water.
15. A composition according to Claim 1, further comprising an organic solvent.
16. A coating composition, comprising an alkyd component that is the reaction product of:
 - (A) a carboxyl functional component that is an optionally partially neutralized reaction product of
 - (1) a polyisocyanate having two or more isocyanate groups, and
 - (2) a reactive compound having two or more carboxyl groups, and one functional group selected from the group consisting of hydroxyl, amino, and mercaptan; and
 - (B) a component comprising one epoxy group.

17. A composition according to Claim 16, wherein Component (B) comprises a glycidyl ester of a carboxylic acid.

18. A composition according to Claim 16, wherein Component (B) comprises the glycidyl ester of neodecanoic acid.

19. A composition according to Claim 16, further comprising water.

20. A composition according to Claim 16, further comprising an organic solvent.

21. A composition according to Claim 16, wherein the polyisocyanate has three isocyanate groups, and the reactive compound has three carboxyl groups.

22. A coating composition, comprising:
a carboxyl-functional component comprising urethane groups, and having an equivalent weight per carboxyl group of 200 or less; and
a second component comprising a plurality of functional groups reactive with the carboxyl groups on the carboxyl-functional component.

23. A composition according to Claim 22, wherein the equivalent weight is about 150 or less.

24. A composition according to Claim 22, wherein the carboxyl-functional component comprises a reaction product of a polyisocyanate and a reactive compound, the reactive compound having one hydroxyl group and two or more carboxyl groups.

25. A composition according to Claim 24, wherein the polyisocyanate comprises an isocyanurate of a diisocyanate.

26. A composition according to Claim 25, wherein the polyisocyanate comprises an isocyanurate of a diisocyanate selected from the group consisting of isophorone diisocyanate, hexamethylene diisocyanate, and combinations thereof.

27. A composition according to Claim 22, wherein the second component comprises oxazoline groups.

28. A composition according to Claim 22, wherein the second component comprises oxazine groups.

29. A composition according to Claim 22, wherein the second component comprises epoxy groups.

30. A composition according to Claim 22, wherein the second component comprises an amino resin.

31. A composition according to Claim 22, further comprising water.
32. A composition according to Claim 22, further comprising an organic solvent.
33. A composition according to Claim 22, further comprising a pigment.
34. A paint composition comprising:
 - (A) a carboxy resin having carboxyl functional groups and an equivalent weight per carboxyl group of 200 or less;
 - (B) at least one component comprising a plurality of functional groups reactive with the carboxyl groups on the carboxy resin; and
 - (C) a pigment.
35. A composition according to Claim 34, wherein the pigment comprises a non-metallic pigment.
36. A composition according to Claim 34, wherein the pigment comprises a metallic pigment.
37. A composition according to Claim 34, comprising a water borne composition.

38. A composition according to Claim 34, comprising a solvent-borne composition.
39. A composition according to Claim 34, wherein the equivalent weight is 150 or less.
40. A composition according to Claim 34, wherein the carboxy resin comprises urethane groups.
41. A composition according to Claim 34, wherein the carboxy resin is the reaction product of:
- (1) a polyisocyanate having two or more isocyanate groups; and
 - (2) a reactive compound having two or more carboxyl groups, and one functional group selected from the group consisting of hydroxyl, amino, and mercaptan.
42. A composition according to Claim 34, wherein the carboxy resin is the reaction product of:
- (1) an isocyanurate of a diisocyanate; and
 - (2) a reactive compound having three carboxyl groups and one functional group selected from the group consisting of hydroxyl, amino, and mercaptan.

43. A method of coating a substrate, comprising:
- (1) applying a composition according to Claim 34 to the substrate; and
 - (2) curing the composition on the substrate.

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